

APA652Mu01 100µg
Active Cluster Of Differentiation 28 (CD28)
Organism Species: *Mus musculus (Mouse)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Asn20~Leu150

Tags: N-terminal His-tag

Purity: >90%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 6.2

Predicted Molecular Mass: 18.7kDa

Accurate Molecular Mass: 19kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

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N KILVKQSPLL VVDSNEVSL S CRYSYNLLAK  
EFRASLYKGV NSDVEVCVGN GNFTYQPQFR SNAEFNCDGD FDNETVTFRL  
WNLHVNHTDI YFCKIEFMYP PPLYLDNERSN GTIIHIKEKH LCHTQSSPKL
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[ACTIVITY]

The cluster of differentiation (CD) antigen CD28 is a central co-stimulatory molecule for TCR-mediated activation such as cytokine production and T-cell proliferation upon ligand binding and TCR stimulation. It is a member of the immunoglobulin subfamily, other members of the subfamily include ICOS, CTLA4, PD1, PD1H, TIGIT and BTLA. Cytotoxic T-Lymphocyte Associated Antigen 4 (CTLA4) and CD28 are highly homologous and compete for the same ligands, CTLA4 can also bind with CD28 to form a dimer. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse CD28 and recombinant rat CTLA4. Briefly, rmCD28 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to CTLA4-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-CD28 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50 μ L stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant mouse CD28 and recombinant rat CTLA4 was shown in Figure 1, the EC50 for this effect is 2.82 μ g/mL.

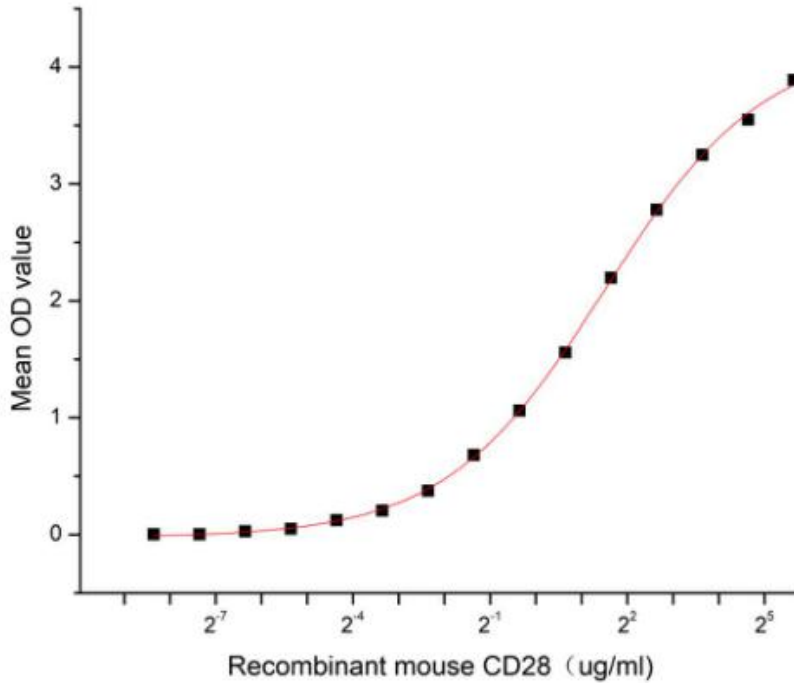


Figure 1. The binding activity of recombinant mouse CD28 and recombinant rat CTLA4

[IDENTIFICATION]

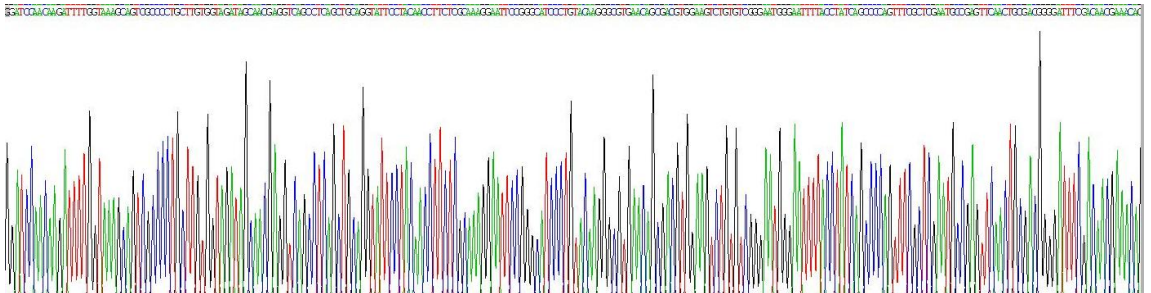


Figure 2. Gene Sequencing (extract)

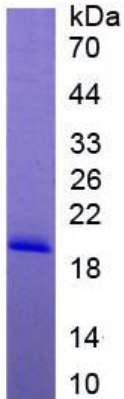


Figure 3. SDS-PAGE

Sample: Active recombinant CD28, Mouse

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.